

GENTLEforce LUX 6000B High-Speed Handpiece (Project 03-19) (2/05)



The GENTLEforce LUX 6000B is the latest air-turbine handpiece from KaVo America that is advertised to offer excellent intraoral access and visibility, user comfort and convenience, and powerful performance. The handpiece reportedly has a smaller head design coupled with

improved head and handle angles to allow both improved intraoral access and visibility. Although the GENTLEforce has the smallest head of any KaVo conventional handpiece, an improved turbine cartridge design with KaVo ball bearings is advertised to provide quiet, vibration-free performance while providing the highest power rating of any KaVo handpiece. The 6000B is also said to contain a proprietary automatic pressure regulator that adjusts to air pressure to provide optimum performance and turbine durability while the cartridge design prevents debris produced during preparations from entering the handpiece head housing. Optimal water spray cooling is said to be provided to the bur tip by four-hole spray ports that deliver a fine water spray mist for better visibility. The GENTLEforce contains glass-rod cellular optics that is touted to deliver 25,000 LUX of illumination while not suffering degradation from the rigors of sterilization. The handpiece is the first in the KaVo line to offer a Plasmatec coating that is designed to reportedly increase the gripping power of gloves to provide slip-free control while allowing a smooth surface to enhance cleaning and infection control. The GENTLEforce is also advertised as being able to be cleansed in thermal disinfectors before autoclave sterilization. The handpiece and turbine are backed with an 18-month warranty (with Quattrocare use, 12 month standard warranty) while the glass optics are covered for five years.

Manufacturer:

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Suggested Retail Prices:

GENTLEforce lux 6000B	\$1200.00
Five-hole Coupler	\$262.00
Six-hole Coupler	\$302.00

Government Prices:

GENTLEforce lux 6000B	\$663.00
Five-hole Coupler	\$154.00
Six-hole Coupler	\$178.00

ADVANTAGES:

- + Excellent longevity following repeated use/sterilization
- + Excellent power (approximately 15 watts)
- + Power did not degrade below baseline during course of evaluation
- + Highest retention of fiberoptic transmission capacity (92%) of any handpiece evaluated by DIS
- + Fiberoptic assembly covered by 5-year warranty
- + Produces less than 65 decibels of noise
- + Excellent concentricity
- + 18-month warranty if maintenance provided by KaVo QUATTROcare automated handpiece maintenance station; otherwise 12-month warranty

DISADVANTAGES:

- None

SUMMARY AND CONCLUSIONS:

The KaVo GENTLEforce LUX 6000B fiberoptic high-speed handpiece displayed excellent performance under DIS laboratory testing procedures. The GENTLEforce has the second-highest power rating of handpieces evaluated by DIS and clinical evaluators reported that it exhibited adequate power for clinical procedures. Also of importance, GENTLEforce power did not degrade from baseline measurements over 1000 simulated clinical uses/sterilization cycles. Fiberoptic transmission was excellent, as the GENTLEforce retained 92% of fiberoptic capacity during laboratory testing, the most of any handpiece evaluated by DIS to date. The noise level of the GENTLEforce was below 65 decibels, which is quieter than most handpieces evaluated by DIS and falls well below the maximum 8-hour, 85-dB(A) exposure limit established by the Occupational Safety and Health Administration (OSHA). The GENTLEforce concentricity ranked in the middle of all handpieces evaluated by DIS and all of the handpieces completed the 1000 simulated clinical uses/sterilizations cycles without any degradation of performance. Clinical users thought that the GENTLEforce handpieces were easy to use and displayed adequate power and torque. Furthermore, the evaluators appreciated the balance and weight of the handpieces, lower vibration and noise production, and all recommended the handpiece's purchase for clinical use. The **GENTLEforce LUX 6000B** is rated **Recommended** for use by the federal dental services.